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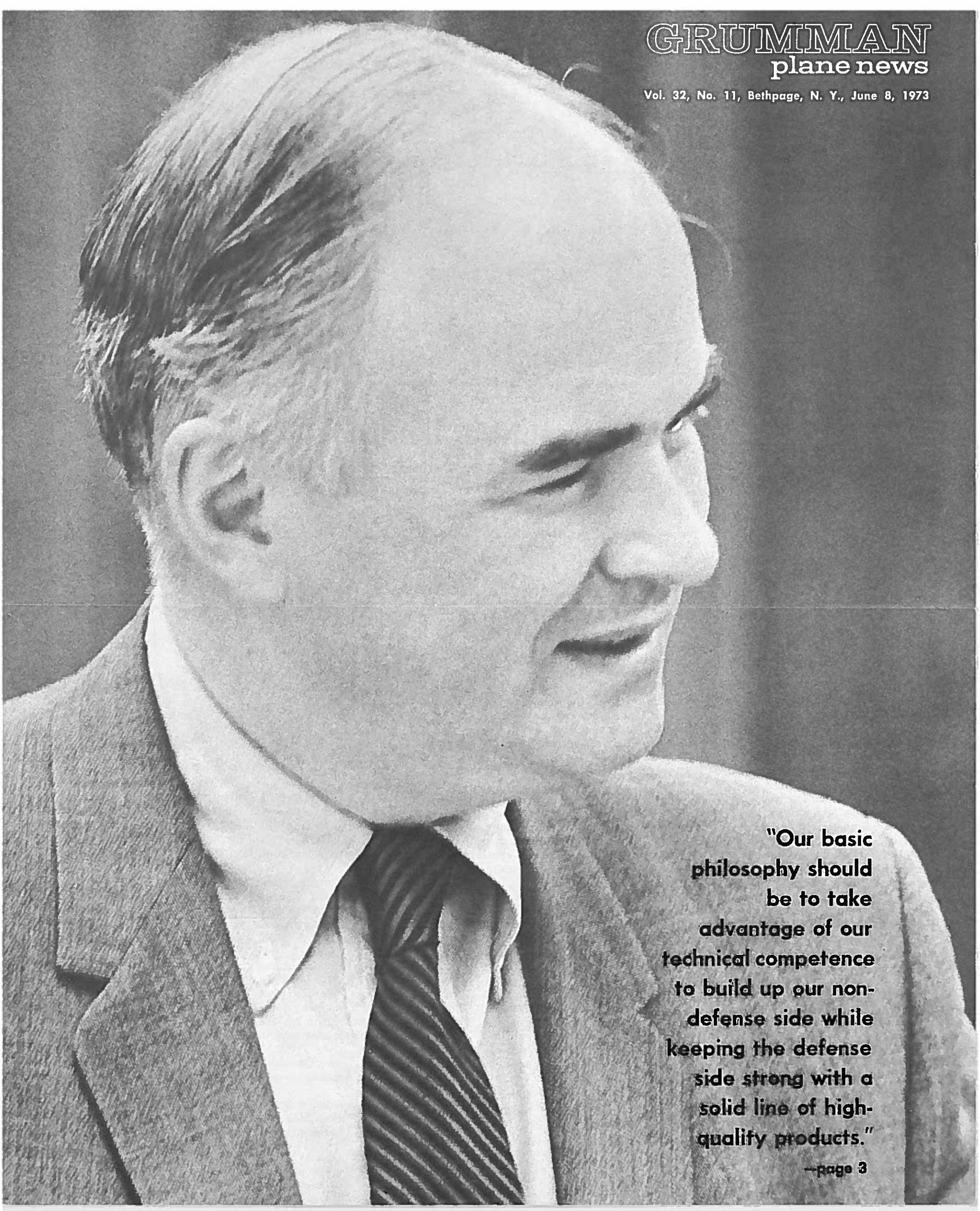


"Our basic philosophy should be to take advantage of our technical competence to build up our non-defense side while keeping the defense side strong with a solid line of high-quality products."

—page 3

AAH winners to be named this month

All those high-pressure days of deadlines, presentations and question-and-answer sessions are about over for the Boeing-Vertol/Grumman Advanced Attack Helicopter (AAH) proposal team. By the latter part of this month, the Army will have announced the two companies selected to build the two prototypes of the AAH, one of which will ultimately become the long-term production contract winner.

The Grumman proposal team, according to Program Manager Joe Rodriquez, has been untiring. "The people have been suberb", he said. "The design which evolved is innovative and cost competitive. It reminds me of the attitude Grumman has when it puts together a winner."

Rodriguez commended Engineering Manager Bob Bonner's design team for its unique approach; Contract Manager Jim Semmon's pricing team for getting out a price which is not only competitive but meets the Army's design-to-c o s t approach; Procurement Manager Lou Arseneau's team; the potential subcontractors; Support Manager Joe Fellingham's team for its flexible logistic support approach; and the entire mockup crew under the leadership of John Arlin.

The AAH will be the U.S. Army's next generation aerial attack system which will replace the Huey Cobra. This two-man attack system will use Boeing's hingeless rotor system which provides unexcelled flying characteristics. Simple fiberglass rotor construction will allow for improved weight savings and resistance to damage in the face of enemy groundfire.

The Boeing/Grumman AAH teaming arrangement was formed last fall. Ron Spencer, Business Development's marketing manager for Army programs and Tom Lahey, assistant to Board Vice Chairman Bill Zarkowsky, who were responsible for getting the two firms together. This AAH team is providing strong competition against such bidders as Lockheed, Hughes, Sikorsky, and Bell.

Grumman's primary task during the prototype phase will be the design and construction of the forward fuselage—including the cockpit and crew displays—and the design, test and integration of the weapons system, which includes a 30 millimeter cannon, forward looking infrared systems, TOW missile system, and 2.75-inch rockets. Final assembly of the AAH will be at Boeing/Vertol's facility near Philadelphia with the flight development program taking place at Calverton in 1975.

The AAH isn't the only project involving cooperation between Grumman and B o e i n g/Vertol. Boeing's UTTAS (Utility Tactical Transport Aircraft System) that is being developed for the Army will be flight tested at Calverton, also in 1975. A unique feature of the AAH will be its use of d y n a m i c components, common to UTTAS such as engine, transmission, flight controls, hingeless main rotor system, and tail rotor. An Army UTTAS production contract to Boeing will mean Grumman production of hardware on a subcontract basis according to terms of an agreement between Boeing and Grumman.

A Boeing/Grumman win on the AAH prototype program means a sizable potential for the two companies of new aircraft into the 1980's. The prototype competition which begins this summer will extend for the next several years. Production is expected to begin in 1979.

Prototype. The Boeing-Vertol/Grumman team which has completed its proposal to build two prototypes of the AAH now awaits the announcement of the winners this month.

50 Grummanites help solve Skylab problem

On May 25, the Skylab I crew — Charles Conrad, Dr. Joseph P. Kerwin, and Paul J. Weitz—got underway from Kennedy Space Center, 10 days behind schedule. The micrometeoroid shield on the orbital workshop cluster of NASA's Skylab I had torn away just 63 seconds after its May 15 liftoff. When thermal and electrical problems crippled the Skylab, engineers at NASA's Johnson Space Center designed and tested "sun shields" of various sizes and types. Three different shields went aboard the Apollo command ship with the astronauts in an attempt to make the temperatures in the workshop habitable. The ultimate solution to ensure the shield would work was produced with the help of the combined manpower efforts of nearly 50 Grumman machinists, engineers and technicians in Bethpage. Their answer: a telescoping extension rod for the Skylab parasol deployment device.

How did Grumman cause this turnaround of the $2.6 billion project?

At 1:30 p.m., on Sunday, May 20, Jack Buxton, Grumman vice president of Houston operations, phoned Phil Vassallo, director of machine operations. Vassallo left his dinner table to call Ed Hertford, machine shop manager in Plant 3, who was hosting a party for his son's confirmation. Both men had grasped an understanding of the situation. The question now: how to salvage the damaged orbital workshop?

That was only the beginning . . .

Hertford continues with this account: "I called Stan Ostrosky, leadman on night shift, and asked him to meet me at Plant 18. Steven Lawrow also met us then went to the warehouse to load the necessary parts from the stockroom. On the way to Plant 3, Stan and I discussed the situation and what it would require to finish it before the deadline of 5 a.m. on Tuesday."

Lights were already burning brightly at Plant 3 where intense planning and sketching were going on. Hertford brought in three men whom he felt were best suited for this type of equipment. They were Emil Calabria, keyman; John Woodworth, leadman; and John Lane, grinder on the night shift. "Along with Ostrosky," Hertford says, "these men were the nucleus of the operation. They worked through the night and on into the morning without any breaks for food."

Woodworth adds dryly: "On top of all that, the coffee machine wasn't working."

Lane recalls the operation as being, "no easy one, 'cause everything was made from scratch." The thread gauge was first and then the tubing. The six sections of the rod, each four feet long, were interlocked by internal threads in both ends.

On Monday morning, crews from engineering and quality control joined in, headed by Joe Kingfield and Bud Lee. Hertford says they were needed for inspection and to finalize the drawings.

In a race against time, the parts were sent to Farmingdale to be anodized. Don Otten carried out this task, assisted by Jack Murray and Pete Yampieri.

Meanwhile . . .

Stan Spero, night foreman in Plant 3, conventional machines, along with Tom Tracy, inspector, and Fred Buck, Spero's assistant, responded to the call from Frank Messina of Space program staff, Plant 25. Messina's message: "Pick-up time is 5 a.m."

Within 20 minutes of the hour the rod was lifted from the oven. At five minutes after the hour, Messina was on his way to Houston to hand-deliver the rods and their documentation for testing.

One set was completed. A back-up set of rods was also needed. By noon Tuesday, the hustle began again. The major difference this time, according to Hertford, was the wall thickness of the tubing and a couple of added parts that were needed.

The final set was delivered to Cape Kennedy by Dominick Pastore of quality control at KSC on Thursday morning, May 24.

"These men should all be commended for their willingness to respond to urgent requests under critical circumstances," Hertford says. Adds Woodworth: "The key word to the success of this operation is cooperation."

Vassallo concludes: "The problem was there and we had the people who could respond."

Talking it over . . .

Jack Bierwirth

"Success with this under-the-surface struggle will bring it all home and make this year's good financial reports into promises of even better days to come."

ALTHOUGH MANY OF YOU RECEIVED COPIES OF the Grumman Corporation annual report and a report of first-quarter earnings for 1973, I thought it might be useful to take a look at how 1973 is shaping up and discuss our present aims.

As you know, until the F-14 accord was reached with the Navy, our very survival as a corporation was threatened. The contract is now settled. We took a net loss of some $200 million on Lots 1 through 5 on the F-14 and we now have to make the tremendous effort to hold the line right there.

In other words, we all have to concentrate on keeping costs down and being as efficient as possible. This is a tough, hard job, yet we have got to achieve it so that by the end of 1974, when we are essentially through with Lot 5, we will not only have survived as a corporation, but we will be coming out of the experience stronger, more competitive, and, most importantly, ready for new business. The job isn't only for the people concerned with the F-14; it's a job for everybody in Grumman. If we can improve our cost performance on the E-2C or sell our computer time more completely in Data Systems, for example, we can assume some of the burden there and make the job a little easier for the F-14 people to accomplish. It has got to be a total team effort.

The financial returns will be difficult to follow and interpret. As soon as the F-14 contract loss was certain, it had to be provided for. This gave us the terrible loss in our 1972 report. In fact, we all know that those losses are actually occurring right now and will continue to occur until Lot 5 is completed early in 1975. However, since the losses were provided for in the 1972 report, and since everyone is dedicated to completing Lot 5 with no more losses, we have an unusual current financial picture. The rest of the Aerospace operations and all of the other subsidiaries of Grumman Corporation will be profitable in 1973. On top of that, because of the 1972 loss, we will be paying very little in the way of taxes in 1973. This will mean that on the surface we will be reporting good earnings in 1973. Under the surface, however, this struggle to hold down costs and achieve our goals will be going on. Success with this under-the-surface struggle will bring it all home and make this year's good financial reports into promises of even better days to come.

One subject I have talked about a good deal since I came to Grumman is diversification. Why? In Aerospace it is obvious that there is a need to produce more than one plane and to have others in the planning stage. In that way, when one of the present planes is supplanted, there are new products coming to the fore. There is also a benefit from having the corporation in different fields. For instance, even if the defense budget is reduced, affecting the total volume of Aerospace, there would be no effect on the sale of canoes, or executive planes, or the setting up of water purification plants. Our basic philosophy should be to take advantage of our technical competence to build up our non-defense side while keeping the defense side strong with a solid line of high quality products.

From Grumman's point of view, it would be ideal to have Aerospace continue to grow as it can, and at the same time have the other subsidiaries growing in their present, as well as in new fields, so that we are less dependent—as a percentage of our total corporate business—on the defense budget. That growth is taking place. Now that we are publishing sales and earnings of each subsidiary of Grumman Corporation, shareholders, Grummanites, and the general public can see that we have, in fact, begun to build a nondefense side to the Company to go with rebuilding the Aerospace side. For people who work at Grumman, particularly those who work in Aerospace, diversification can create a type of insurance policy: if earnings are coming in from the non-Aerospace side of the company, those earnings are available to the total corporation, including Aerospace, for new projects and new efforts that Aerospace previously would have had to generate entirely on its own; it can be job insurance. Evidence of this is the degree to which Grumman people have had the opportunity to transfer and work in some of the newer projects.

True, a Grumman Allied canoe doesn't involve as many people in its production as an Aerospace product; but there are former Aerospace people involved in the production of Grumman Allied products, and as Grumman Allied grows—or any other subsidiary, for that matter—there will be new job opportunities created at each new stage of its growth.

It's also important that we look outside of our own capabilities and be willing to merge with or acquire companies that are in interesting fields. We'll try to do this when we feel that our expertise, when added to the new company's capabilities, would make the combination a much stronger entity. For awhile, the F-14 contract problem pretty well stymied our diversification plans, but now we should be able to accelerate our diversification efforts.

One of our recent mergers, in which we combined our commercial aircraft operations with those of American Aviation, has been doing well. It hasn't been easy. People have had to adjust to it. But Grumman American is having a great year in 1973. The dramatic improvement in the economy has made the past and current years great ones for the Gulfstream II. The farmers are also enjoying boom times which we don't enjoy in the form of higher food prices, but which do make for a great Ag-Cat year. The job being done in Cleveland has also been good. At the time of the merger we felt that the products of American Aviation would develop stronger than ever. By 1975, the Cleveland operation will combine with the Gulfstream II and the Ag-Cat to make Grumman American into a strong part of Grumman Corporation and a strong general aviation company as well.

It hasn't been easy for Aerospace to watch Grumman American being set up as a separate entity with the Gulfstream II—which had been one of its crown jewels—as a prime product. But the more successful Grumman American is with the Gulfstream program, the more business it could mean for Bethpage in the manufacture of parts, engineering support, etc., that Grumman American might need. And the more successful Grumman American becomes, the better the total image of Grumman Corporation.

We gain recognition for what we do well, wherever we do it. It strengthens the corporation financially, and, more importantly, it strengthens Grumman Corporation's reputation . . . and its reputation is the most important asset of any corporation.

It is hard to say what Grumman's sales pattern will look like in five years. For that matter, if one of us knew, it wouldn't be smart to advertise future expectations in print. However, it is a certainty that Grumman will be a growing, high-technology company with a broader line of products. The future has some real excitement in it, and I count that day last summer when I came on board as a very good day for me.

Samuel Knight is honored at luncheon as 'idea man of year'

An unexpected surprise in the amount of $1,500 in U.S. Savings Bonds and an engraved silver bowl came into the hands of Samuel Knight as he was honored "idea man of the year" at the seventh annual Project Sterling Awards luncheon.

Grumman Aerospace President Joe Gavin presented additional bonds and silver bowls to the 10 other finalists for their efforts in submitting the most outstanding suggestions during the July 1971-72 period.

How are the winners selected? The Suggestion Awards Committee selects suggestions by factors based on the present and future benefits to the Company; originality; and the nature of the individual job in relation to the suggestion. After a preliminary screening, the top 25 suggestions selected are re-evaluated and 11 finalists are chosen. Six of these are reviewed by the Executive Operations Board from which the top award winner is chosen.

The Committee members are: Albert Shuckle, chairman, Natale Busi, Frank Edwards, Thomas A. Campo Jr., Gregory Kierdorf, Eugene J. Bonan and Phillip Vassallo.

Knight, of F-14 final assembly in Plant 1, suggested replacing the Wiggins fuel line coupling with standard "AN" union and nuts on 105 tube ends. Knight comments that, "having been in the Air Force and working on other aircraft the idea occured to me that these replacements would be easier to work with and would be much cheaper." This change saves 33 manhours and $629 in materials per aircraft.

Second-place winner, John Zito, a technician in instrument test, Plant 5, received $1,000 in U.S. Savings Bonds and an engraved silver bowl. In previous years second-place winners have received only $500 in bonds, but the Committee felt the quality of Zito's suggestion of sufficient importance to award him an additional $500. He was recognized for his alertness in discovering hair-line cracks in F-14 box-beams and bulkheads prior to loading which resulted in the prevention of confusion and delays.

Of the 2,116 suggestions submitted during the year, 60 percent were approved, yielding an estimated cost savings to the Company of more than $5.5 million. A total face value of $50,050 was awarded in bonds, along with 2,400 three-dollar certificates awarded to 1,149 persons who generated minor savings for the Company. These award certificates are redeemable for merchandise on sale at the Employee Services Office.

The other year-end recipients of $500 U.S. Savings Bonds and silver bowls were:

Robert Hess, environmental test engineer, Product Engineering, Plant 5, who was recognized for developing a new program for computerized load control for static and fatigue testing on the F-14 program, and for outstanding efforts in selecting the best equipment and methods for improving test capabilities;

Walter Richter, planner, cutting tool control, Plant 2, for suggesting using bored wooden blocks to hold endmills by their shanks during transportation and storage;

Al Vogel, product manufacturing, Plant 2, who suggested converting standard "sharp" endmills (purchased in large quantities) to ball or special radii endmills by local cutter grinding sellers, in lieu of purchasing direct from the cutter manufacturer;

John A. Wood, facilities maintenance, Plant 35, designed an automatic ceiling tile washing machine.

The following persons received $100 U.S. Savings Bonds:

Walter H. Aims Jr., leadman, fuselage sub-assembly, Plant 1 (presently foreman); Reginald T. Farrant, group leader, methods, Plant 34; Harold W. Lockwood, leadman, hydraulics lines, Plant 2; William Moran, planner, Plant 35; Gloria T. Moore, computer terminal operator, critical material control, Plant 21.

Airlift. UTTAS helicopter, although it can transport 11 people in addition to a three-man crew, can be airlifted itself to battle areas. Here, one of the Boeing choppers, with rotor blade and tail boom folded, is being taken aboard giant C-141 transport. (Boeing photo)

GDS to assist Boeing in UTTAS test

Grumman Data Systems will assist Boeing Vertol in testing three prototype aircraft for the U.S. Army's Utility Tactical Transport Aircraft System (UTTAS) when that development program gets underway at Calverton late next year. Two years ago, Boeing Vertol awarded the GDS Telemetry Products group a $400,000 contract to develop real-time analytical software for the Automated Telemetry Station (ATS), which will be used to support the UTTAS flight testing at Grumman's flight test center at Calverton.

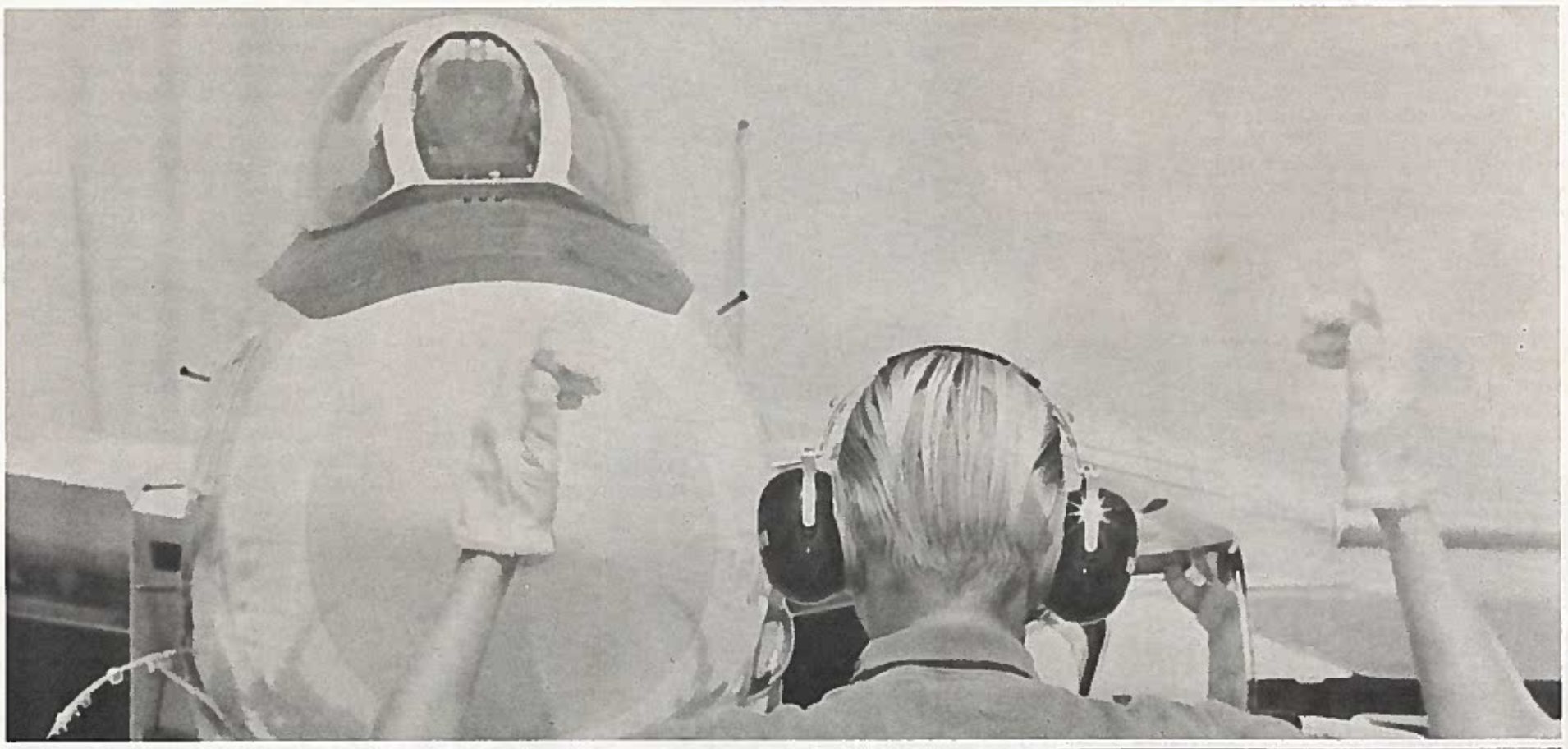
The UTTAS aircraft is a new twin-engine, single-rotor helicopter that is designed to carry 11 troops and a three-man crew. It is scheduled to replace the UH-1H "Huey" in the assault transport role in the late 1970s and can be used for medical evacuation and logistics, as well. The Boeing Vertol UTTAS utilizes a new rotor system, a simplified hingeless-rotor using composite materials, that is designed to give the pilot excellent handling of the helicopter.

First flight of the prototype aircraft is scheduled for November 1974 at the Calverton facility. The Grumman ATS, with software developed by GDS, will play a significant role in the development of UTTAS. According to Dick Hutchings, GDS UTTAS program manager, "Although this is the first application of real-time testing to helicopter development and the first introduction of the ATS to helicopters, both Grumman and Boeing are confident that the UTTAS will reap the same significant benefits and savings as those achieved by the F-14. The ATS capability is universal to the aerospace test world because it can accept new and different aircraft without modification to the basic system."

As Ray LeCann says, "We developed the ATS and our Tele-SCOPE 340 software on the premise that a universal solution to flight test information processing was possible. Our ability to support Boeing's program without increasing the ATS facility or having to modify system operating software is indicative of the degree to which we have succeeded."

Hutchings also feels that "This is just the beginning of real-time testing of helicopters. Should the Boeing Vertol/Grumman team be successful in winning a development contract for the Advanced Attack Helicopter (AAH), it also will utilize the ATS during flight testing at Calverton.

LeCann expects that GDS will be receiving additional contracts from Boeing Computer Services for continuation of the software development and for the operation of the ATS in support of the UTTAS development program at Calverton.



View from Miramar:

Unparalleled praise for F-14

The aura of Tomcat success has clearly matured into actuality. The view from Miramar confirms it. Take a sampling of Navy men telling it as they see it:

"Superb! . . . Boy, she's steady . . . Point the nose and you're there."—Cdr. Sam Leeds, skipper of VF-1.

"A piece of cake!"—Cdr. J. Taylor of training squadron VF-124 after his first in-flight refueling.

"A beautiful aircraft . . . just great!"—Cdr. E. Thaubald, weapon system operator, VF-1.

"Textbook. All systems worked perfectly."—Cdr. Dick Martin, commanding officer of VF-2.

And there are some first-flight reactions that appear typical:

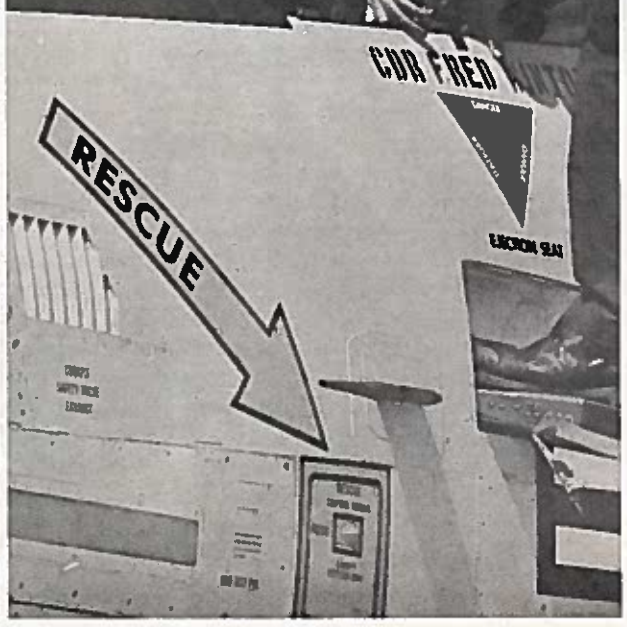
"Flies like a dream, stick response great."—Lt. Cdr. J. Haley.

"Climb rate fabulous, handles great."—Lt. Cdr. S. Housak.

Navy pilots and WSOs have flown eight Tomcats at Miramar so far, with results such as those quoted. The research and development aircraft have been delivered to test sites, and production aircraft are coming out of the Calverton facility at a rate of four a month. Add to that something very significant: squadrons VF-1 and VF-2, each with 12 aircraft, will be available before the end of the year.

Remember, too, fly-offs between Grumman Chief Test Pilot Chuck Sewell in the Tomcat and Lt. D. White in a slotted-wing F-4—an aerial contest in which all flights ended in victory for the Tomcat. Lieutenant White is said to have commented that he got tired of being "shot at" (figuratively), and that he couldn't believe the high energy available to the F-14A, even in turns, at high angles of attack.

The loudest plaudits seem to be coming from the Navy pilots, not from the plane's producer—which is the acme of praise. It's genuine, as a base radio operator at Miramar found out. He asked, "When are you coming home?" The delighted pilot responded, "Never!"



The High-Pressure Hot Seat of the Test Conductor

"Looks good. Let's do push-pull on the stores," says Tom Phillips, assistant test conductor, who's working in the flight test control center of Plant 7's ATS (Automated Telemetry Station).

"Over to you, Bobby," responds test pilot Don Evans, who, with Weapon Systems Operator (WSO) Dennis Romano, is in the closed cockpit of Tomcat No. 3. Bobby Roth, the plane captain, stands near the blast fence at the west side of Plant 7, where he can look up at the flight tower, answers:

"Standing by, Tom."

"Nose outboard, station one," says Tom.

"Nose outboard stand by—mark it," Bobby replies.

And so goes the dialogue during the early stages of a ground checkout prior to a test flight at Calverton. It's clipped, punchy, "and it can be as dry as dust," says TC (test conductor) John Kispert, who will take over from Phillips once Tomcat 3 is in the air.

"It's not a glamorous job," says Kispert, "but it is a pressure job, especially from take-off through landing when the TC is handling communications with the air crew, flight support engineers, Gruman Data Systems personnel involved in a flight, and people at the operations center."

According to Tom Kastner, Corporate ATS manager, "The TC is the new man in the cockpit." He's speaking figuratively, of course; but in the team sense, the TC is part of the crew. He has to be.

The TC job grew out of the necessity of handling a flood of information from extremely complex aircraft such as the Tomcat. Consider the test operations for flight envelope expansion for A-6A versus F-14, for example: 12 parameters telemetered for A-6, 300 to 500 for F-14, or three or four engi-

neers required for the ground station communications net for A-6 as compared with 15-26 people with hot-line access to six supporting areas for F-14. And more . . .

When you put on the headphones you begin to comprehend complexity. From one ear, the voice of Evans or Romano, from the other, the voices at ATS. And the background chatter of those in the ATS who are not transmitting.

Bobby: "Okay, Don. You're all clear to cross bleed."

Don: "Going idle. Fuel pressure."

Bobby: "Good light."

Don: "Okay. I'm ready for emergency generator, Tom."

Tom: "We're ready—generator."

Don: "Mark it. That checks all right."

Tom: "We're ready for the OBC (On Board Checkout)."

Don: "Mark it—left, right—I show them both out of stow."

Tom: "We show the left No. 2 in stow."

Don: "Roger. Mach lever okay."

Dennis: "Okay, MCB (Mid-Compression Bypass) going open. Going back to auto—mark it. Be advised that my left light is out."

Preflight items

The ground check drones on as each preflight item is read out and confirmed by both the flight crew and the test conductor.

It all seems fairly methodical now. A routine has been established, always subject to changes to enhance operations. That wasn't so at the beginning. When the TC job was created in April of 1971, the specific responsibilities had not been nailed down. "We knew we needed top individuals," says Kastner, "and we knew that flight safety was paramount. We knew, too, that a rapid test cycle was imperative. We had goals, and they had been broadly set out a year or more before the first flight of an F-14. But the ATS was a first-of-its-kind effort — and no one has anything to compare with it today. So it took some experimenting to find out what could really be done."

As matters began to jell, the TC's responsibilities were defined:

- Technical conduct of a flight, with sole communication with the flight crew interfacing up to two dozen engineers.
- Assessment of all information during a flight so as to judge progress from maneuver to maneuver, test point to test point.
- Coordination of instrumentation requirements and aircraft configuration from flight to flight.
- Coordination of ground station requirements, e.g., parameters to be looked at, in what form and sequence.
- Preparation of flight cards, pre- and post-flight crew briefings, and support crew briefing.
- Follow-up with shop and engineering on aircraft problems and anomalies.

In this arrangement, the team manager for development for an aircraft deals with maintenance personnel, and the plane captain is responsible for having his specific aircraft ready for flight.

The line crackles and Bobby reports that "Everything is locked and armed. Everything looks okay out here. Have a nice flight." From the Tomcat comes a "Thank you, Bobby," and Dennis asks the tower for taxi instructions. Then another set of checks is run, and TC John Kispert replaces Tom. A little later, John answers, "Ready to go."

Don: "Roger."

Dennis: "Peconic tower Flight 8 is ready for take off."

Tower: "Flight 8, Peconic: you're clear to take off, runway 23."

Don: "On the roll."

Dennis: "80 . . . 90 . . . 100 . . . 110 . . . 120 . . . 130 . . . 140 . . . 150 . . . ."

Don: "Coming out of burner . . . okay, she's clean, all lights are out."

Dennis: Peconic tower, going to clear channel 9."

Tower: "Roger. Clear channel 9."

Don: "My afterburner staging is going kind of funny on that left engine, John. What it's doing is the AJ is cutting back and rising. Nozzles are opening and then closing and opening again on throttle advancement."

In-flight dialogue

Dennis: "Tracker (IFF). Flight 8 is up."

Tracker: "Eight Roger — heading 30."

Don: "Did you get that, John?"

John: "Roger, Don. We're just talking about that and we suspect the AB fuel control."

Don: "Because I'm starting to get a nozzle shut-down like the afterburner is going to go off before it goes into zone three . . . then it comes into zone three and the nozzle starts opening again."

John: "Does it appear to stabilize in zone five okay?"

Don: "Yes."

John: "The data shows the left engine is stabilized in military power and operating normally. Let's try a rapid transient to zone 5 afterburner."

Don: "Roger, mark it . . . The staging looks normal."

John: "Roger, Don. It looked good to us. Let's continue with the flight profile and we'll follow the left afterburner operation during the flight."

The flight continues as people on the second deck of the ATS man two data analysis consoles and six strip chart recorders on which real-time data flows in on propulsion, stability and control, and fuselage loads; and on the first deck, where the big computers are located, measurements are taken on wing loads, Sidewinder missile loads, and vertical tail loads. (As necessary, Phoenix missile loads are charted, too, but at the second deck.)

The pilot and WSO, the tower, the tracker, a helicopter, the ground support people, the TC and his gang—lots of people are involved to make certain things go the way they should. "The pilot is the man at the helm," says Kispert, "but the real point is that no two, three, or four men—however talented—can do the job. It has to be a full, all-out team effort. Team, the whole team, is it."

The flight conversation continued, mainly among Don, Dennis, and John; and then No. 3 landed (though another flight would come that day). John Kispert and the ATS team relaxed.

"Now there's a debriefing, a report to write, and we go at it again," Kispert said. "We'll be talking with the flight crew: close communication is a must, and we all get along together so informality is the tone. It's the same in the hangar. It's a smooth operation that's getting even smoother all the time.

"Work? You can bet it; and taking some of the load off the backs of the pilot and the WSO is a responsibility we all share."

Kispert smiled and added, "You know, this job is fun. That seems strange to some people because, on a typical day, we're the first ones in, and the last to leave. . . . "

'New man in the cockpit' is one way of describing the test conductor (TC) who, with his crew at the Automated Telemetry System, is 'on line' before and during flight-test activities. It takes a burden off pilot and weapons systems operator and slashes flight-test time and costs, allowing new aircraft to get 'over the fence' more rapidly than ever before. (Photos by Gerry Costello.)

Tuning in. When Rockwell International's B-1 bomber takes to the skies, flight analysts will be able to tune in on the various segments of its test programs through an Automated Flight Test Data Center, similar to the one shown here, the ATS at Calverton.

Air Force awards $4.4 million contract to GDS to build AFTDS for B-1 program

Rockwell 1 to base: *We're over Truth and Consequences, New Mexico, ready to commence stability and control test.*

Test conductor: *Roger. Computer configured. Do pitch and yaw in sequence, with stability augmentation system (SAS) "on." Hold for SAS "off" clearance.*

Rockwell 1: *Wilco. Standby. Pitch pulse . . . mark it. Yaw . . . mark.*

Test conductor: *Roger, Rockwell 1, we're checking computer answers against predictions and taking stabilized performance data. Test results look good for SAS "off" work. You're cleared to continue.*

And so might the conversation go betwen pilot and flight test conductor when Rockwell International's B-1 supersonic bomber streaks across the skies next year during its initial flight tests. Instant response, instant decisions . . . the same type of real-time environment that enabled Grumman through its Automated Telemetry Station to trim time and cost from the F-14 test program.

Rockwell International's B-1 program will soon gain these same advantages because the Air Force has awarded Grumman Data Systems a $4.4 million contract to build a real-time flight test data processing system at Edwards Air Force Base in California.

"We feel certain that the Automated Flight Test Data System (AFTDS), by providing instant answers to the complex mathematical equations involved in the B-1 flight testing, will make a substantial contribution to the bomber's test and development cycle," said Lynn Wilson, GDS program manager for AFTDS.

The system is patterned after Grumman's Automated Telemetry Station, the first of its kind in the field. Through a telemetry link with the plane, it will record, analyze, and display information concerning the structural, propulsion, internal subsystems, and dynamic behavior of an aircraft in flight. The Automated Flight Test Data System will operate under control of Grumman's proprietary executive operating system, Grumman Tele-SCOPE 340, a software package which provides programming instructions to the various subsystems and CDC 6500 computer.

In its final configuration, the system will simultaneously support scientific batch processing, radar range, timeshare, and real-time on-line vehicles.

The entire system permits each flight test to be performed in an "adaptive" environment. In other words, it transforms each test flight into an immediate-response situation in which the flight analyst bases upcoming decisions and vehicle maneuvers on what has just happened, or is curruently happening during the flight. The AFTDS provides the center analyst with assistance when he needs it the most—during the flight test. This enables him to resolve problems as they arise, rather than attempting to construct the event days or even weeks later as was necessary before ATS was introduced.

As Ray LeCann, GDS director of Telemetry Products, sees it: "Interaction with the computer will permit B-1 flight tests to be performed in an environment of total knowledge and information on every aspect of the aircraft's aerodynamic behavior."

Under terms of the Air Force contract, GDS will provide telemetry formating, preprocessing, and display subsystems, in addition to the software operating system, Grumman Tele-SCOPE 340. The Automated Flight Test Data System at the Air Force base will be constructed to allow expansion from its present configuration to that of the Grumman ATS: three simultaneous real-time operations with automated equipment switching.

Initial equipment delivery is scheduled for May 1974, with verification and final acceptance set for August of that year. The final operating system, Grumman Tele-SCOPE 340, will be delivered to the center in November '74. The total system will be fully assembled and verified at Calverton before it is shipped to California. GDS, as prime contractor, is fully responsible for the installation of the data system as well as for the performance of the two major subcontractors, Control Data Corporation and EMR.

LeCann sees this initial delivery of the AFTDS to the Air Force Flight Test Center as only the first of many by the Telemetry Products group at GDS. "The ATS concept and its derivatives have aroused a great deal of interest from potential customers," says LeCann. "Grumman Tele-SCOPE 340 and Grumman Tele-DYNAMIC (an advanced analytical technique for in-flight flutter analysis) have proven their capabilities in support of the F-14, and form a portion of a product line currently under development by the Telemetry Products Group for sale to the general information-processing community."

Grumman Rose Show June 15

The Grumman Garden Forum will present its second show of the year—the 1973 Rose Show—on Friday, June 15, in the Plant 30 cafeteria. There will be 33 classes including eight novice categories.

You can pick up a colorful Rose Show announcement booklet at the ESO offices. It contains all the necessary information for entering the show.

Prizes are provided by G.A.A. which include first, second, third and honorable mention ribbons in every category, as well as bowls for the first place winners in each major class and for the "Queen-of-the-Show." Flight Shop gift certificates provided by Employee Services and totaling over $100 will be awarded to the winners in each major class. The Jackson and Perkins Co. has provided special awards to be distributed at the show for best Flori Bunda and to three novice winners.

So, all you gardeners, start feeding and talking to your rose bushes. We'll see you at the Rose Show.

Hawkeye Squadron Gets Safety Award

The men of Carrier Airborne Early Warning Squadron 126, who fly the Grumman E-2 Hawkeye, have something going for them . . . and they're undoubtedly pretty happy about. Recently, the Commander Naval Air Force, Atlantic Fleet, awarded the group a citation for a year of accident-free aircraft operations. It was the third consecutive award for the squadron and was presented to Cdr. H. J. Bernsen by Cdr. L. R. Meyers, who commands Attack Carrier Air Wing 17 aboard the carrier Forrestal.

Carrier Airborne Early Warning Squadron 126 has flown its E-2 Hawkeyes for over 6,330 hours without an accident since the unit was commissioned on April 1, 1969.

Change of pace. After a couple of years duty at Plant 77, Lt. Col. Arthur Bowdoin (L) is headed overseas to join the U.S. Military Assistance Group in Iran. Lt. Col. Eugene Walsh succeeds him as Army plant representative at Stuart.

Walsh succeeds Bowdoin as Army rep at Stuart plant

STUART, FLA. — Lt. Col. Eugene Walsh succeeded Lt. Col. Arthur Bowdoin as U.S. Army plant representative at the Grumman facility here on May 16 in a ceremony aattended by Col. John Love, former Mohawk project manager, and by many of the Grummanites at Plant 77. Colonel Bowdoin has been reassigned to the Military Assistance Group in Iran.

Recently, the Army awarded Grumman a $5.4 million contract to update some of the older Mohawks to the configuration of the most modern Mohawk, the OV-1D. In earlier versions of the Mohawk, the A model carried only photographic equipment; the B contained side-looking airborne radar (SLAR); and the C was equipped with an infra-red system (I.R.) for its aerial surveillance mission. The last D model was delivered to the Army from Stuart late in 1970.

Among the improvements included on the D version of the Mohawk, which will be incorporated on the Mohawks to be modernized, are:

- Higher powered engines to retain short-field takeoff and landing capability
- Rearrangement of the battlefield surveillance systems (SLAR and I.R.) on pallets to allow a battlefield commander a quick-interchange of the two systems in the same airplane, depending on the mission
- Superior inertial navigation system
- Vertical panoramic camera that photographs horizon to horizon
- Radiological monitoring system
- Electronic counter-measures equipment to provide greater assurance of mission success

So, the OV-1D can now perform the same missions as the B and C versions of the Mohawk.

These features, combined with the Army's ability to maintain the OV-1D without extensive support equipment, contributed greatly to the Mohawk's success during intelligence gathering operations in Southeast Asia. This success contributed greatly to the Army's decision to maintain the Mohawk as its primary aerial surveillance system for the next decade. During the change-of-command ceremony, Colonel Love stated: "The U.S. Army is the only army in the free world possessing this capability. You, the people at Stuart who helped provide it, have every right to be proud."

In addition to the actual conversion of the first four aircraft to the OV-1D configuration, the $5.4 million contract also involves a substantial amount of engineering redesign, re-writing of maintenance manuals, and flight testing. First delivery is scheduled for July 1974.

Current Army plans call for a large number of older Mohawks to be modified over the next five years, with the major portion of the work to be performed at Stuart. Tom Doyle, resident manager at Stuart for Mohawk conversion, says: "It is very rewarding to see that the hard work by many people in the government and at Grumman is finally coming to fruition."

Monahan named new director of Central Purchasing

Grumman Aerospace Corporation has announced the appointment of John F. Monahan to director of Central Purchasing. Prior to this appointment, Monahan served as manager of Machined Parts and Raw Materials.

Monahan received a B. S. degree in mathematics from Boston College in 1952 and has held various general administrative posts in procurement and sub-contracting in aircraft and aerospace corporations.

Monahan served in the Navy before joining Sperry Gyroscope Company in 1953. In 1960, he joined Republic Aviation Corporation where, as general purchasing agent, Monahan supervised and managed a department of 250 employees in an integrated material department and became experienced in procurement operations and subcontracting.

Monahan came to Grumman Aerospace in 1964. Initially, he was an assistant on W. N. Robertson's staff and later moved into procurement management. In his new position, Monahan reports to W. D. Paxson, director Procurement Management, and brings to his new position extensive experience in managing procurement operations involving both small and large contracts.

John Monahan

Honeycomb. Metallic pattern of honeycomb used inside F-14 stabilizer casts ghostly glow on Grumman photo lab employee Ken Johnson, shown here setting up stabilizer for photographs. Picture was taken in F-14 assembly area of Plant 3. (Photo by Jim Wagner)

Wanted

DINGHY: To/from mooring, reasonable. AN 5-5676.

BOAT: Avon, or same quality, infaltable rubber boat, 8 or 9 ft. long. FR 8-3210.

TRAINS: Old. Electr., Lionel, Ives, or Amer. Flyer, small or large sets. JU 4-6771.

BAR-BELL SET: for teengare. up to $10. 212-TW 8-3023.

POOL FILTER: Charcoal or sand, for 18 ft. dia. pool, motor not required. 289-4539.

RIMS: Two, for '72 MGB. OR 6-6956.

LAWN MOWER: Self-propel., rotory, w/grass catcher. 681-9588.

TARPAULIN: 8x14 ft. or larger, Very pistol, flares, life jackets. HA 3-8437.

HOUSE: Two bedrm. house, Freeport or Hempstead. 378-4426.

BOAT: Cape Dory, 10 or 14 ft. w/sail, trail, too. 643-3062 after 5 p.m.

BOAT: To rent, 12 to 15 ft. boat and trailer, July 28-August 5. 273-6411.

BOAT TRAILER: 16 ft. PY 6-3407.

PARTNER IN PLANE: Share in 1fr. equip., bonanza, partner must have or be close to instrument rating and participate in maintenance work. T. Hine, Ext. 2619.

APARTMENT: 3½ rm. for young couple, immed. occupancy, priv. home, or garden apt., reasonable. 681-0560 after 4 p.m.

OSCILLOSCOPE: 5 in., good condition, operating reasonable. 265-2774.

CANOE: 16, 17, or 18 ft., Grumman alum. type. WE 5-2865.

FIREPROOF BOX: One small, w/or w/o lock and key. CH 9-2663.

Car Pool

HUNTINGTON STA.: Start or join, Maplewood area to Plant 30 & vicinity. 8 to 4:30. 271-4486.

STONY BROOK: Strathmore to Calverton, 8 to 4:30 p.m. 751-1256.

WEST BABYLON: To Plant 35, 8 to 4:30 shift, Kathy, 884-7257.

CROSS BAY BLVD.-SO. STATE: Will pick up en route. 212 VI 7-6236.

BAYSHORE: To Plant 5 or 25, 8:12 - 4:42 p.m. 665-1941.

For Rent

TOWN HOUSE: Sugarbush, Vt., fully furnish., 3 bedrms., 2 baths, w/w, dishwash., htd. pool, tennis, golf nr. by., wkly./monthly. 692-7134.

APARTMENT: Holbrook, Sachem schools, new, w/w, upper fl. 3 bedrms., $300/mo.; lower floor, $275/mo., priv. lg. yd. 588-1778.

HOUSE: Shoreham, furn. or unfurn., ranch, 2 or 3 bedrms., 2 bathrms., fam. rm. w/firepl.. dishwash., ¾ acres. 744-6921.

APARTMENT: Modern 5½ rm., in new 2 fam. home, nr. LIE, shops, ask. $250/mo. 212-445-5579.

FURN. RM.: Priv. bath, entr., nr. Grumman. WE 5-5012 after 6 p.m.

FURN. RM.: Bethpage, priv. entr., close to shops, trans., work. 822-3819.

FURN RM.: Bethpage, refrig., hot plate, priv. entr. 938-6999.

APARTMENT: 5 rms., Bethpage. lease & security, $275/mo. OV 1-7845 after 5 p.m.

ROOM: 3 rms., and utilities. Bethpage. 681-5921.

HOUSE: Panamoka , 2bedrms., resort area, beach rites. 929-4696 after 6 p.m.

FURN. APT.: Port Jefferson, June 1 to Sept. 1, reasonable. 473-5408.

FURN. APT.: 3 rms., priv. entr., 5 min. fr. Grumman, bath, kitch., utilities included, $235 monthly. V. Addamo, Ext. 7675.

HOUSE: Center Moriches, 3 bedrms., 1/3 acre, gar., nr. beach, $270/mo. 473-7707.

HOUSE: Pocono Mts., 2 bedrms., w/bath, kitch., din. rm., v liv. rm., priv. pools, priv. lakes w/use of boat. reasonable. LI 1-5177 after 6 p.m.

HOUSE: Bayville, custom hi-ranch, 4 bedrms., 1½ baths, panel. den, built-in bar, w/w, $450/mo. 628-2202 after 4 p.m.

TRAILER: Hd. tp. camper, sleeps 7, foam mattr., gas range, sink, ice box, dinette, storage. HA 7-7344.

HOUSE: Furnish., Port Jefferson, 4 bedrms., liv. din., fam. rms., wd. ¼ acre, sun deck, beach rites, $400/mo. July 1973 to August 1974. 473-4828.

For Rent

HOUSE: Levittown Cape, 3 bedrms., kitch., liv. rm., bath, newly decor., avail. July 1, $325/mo., plus utilities/security. 433-4227.

APARTMENT: Cocoa Beach, Fla., rental unit, 3 bedrms., 2 baths, liv. rm., din. rm., kitch., 3rd floor balcony, compl. furnished, pool. 567-6916.

For Adoption

KITTENS: 2 male, 1 female, thick fur, gray-blk. wht. HA 1-3243.

SHEPPARD: 2 yrs., male, ideal watch dog, aggressive, JU 1-2740 betw. 6:30 p.m. to 8 p.m.

Ride Wanted

TO PLT. 2: From E. Northport, 7:30 a.m. to 4:00 p.m. shift, Larkfield Rd. & Fifth Ave. vicinity. Call after 5 p.m., will alternate. John Grodeski, Ext. 2147.

Found

UMBRELLA: Man's, in Plant 40. Call B. Rodstein, Ext. 86809.

For Sale

BOAT: 25 ft. Chris Craft Lancer, '70 Sport Fisherman-FG, flybridge, twin 150 hp, dual stations, 89 HRS, loaded, immacul. $11,000. 864-4900.

POOL FILTER: Ampro 40 gal steel tank 3200 GPH pump capacity, ¾ HP motor, sand or charcoal fill, $75. TU 4-8191.

TRAILER: '70 Holiday travel, 25 ft. fully self cont., penthouse roof, sleeps 6, stereo tape deck; '70 Chev. Bel Aire fact. trailer pack & air, super lift, shocks, $6,500 or sep., trailer, $4,000. 433-7689/433-6140.

HOUSE: Babylon Village, waterfront, brick, col. cape, fenced, 3 bdrm, bath, 40 ft. Bulkhead, boat ramp. IU 7-1294.

HONDA: '71 CB100. 99cc, 425 mi., color-gold. 698-0518.

CHEVY: '68 Nova, 4 dr., 6 cyl., a/t, a/c, $825; towbar, $45; truck topper, 8 ft. bed, $225. 698-3697.

MISC.: Depth finder, Heath, used once, $50 firm; welding outfit, cutting torch, sm. "Q" size bottles, $200 firm. 585-5802.

CHEVY: '69 2 dr. custom cpe., 24,000 mi., a/c, rr./defrost., w/w, tint. gl., brown w/beige vinyl rf., $1,975. 437-4864 after 6 p.m.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.
Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

For Sale

POODLES: Selective-breed, show or pet. WE 5-2083.

TENT: Morsans, 10 ft. x 13 ft., $95. 420-9472.

HOUSE CONTENTS: Lvg. rm., bdrm., dng. rm., kit., den, patio furn., new appliances. 249-4083.

HOUSE: E. Massapequa, 2 bdrm. cottage, lndscpd., located in wooded setting, waterfront prop., $28,000. 598-3793.

HOUSE: Col., 4 bdrm., ½ acre lot, low taxes, xtras. HR 3-8582.

PROPERTY: Southern Vermont, 1 acre in Alpenwald devel. on Rte. 8 opp. Dutch Hill Ski area, year-round swimming, sauna. centrally located near sev. ski areas. HA 7-7344.

HOUSE: Port Jefferson Station, 4 bdrm., dng. rm., pan. den, bsmt., golf course view, $35,000. 473-0685.

BOAT: 18 ft. Imperial, fbglgs., 75 hp Evinrude elect. start, alternator, tilt trailer, xtras. IV 9-9388.

BOAT: '52 Jersey Skiff, 24 ft., 105 hp inbd. Chris-Craft, $1,500. LT 9-7119.

HOUSE: Glen Head, 10 rm. Cape Cod, N. Shore schools, 4 bdrm, 2 baths, eat-in-kit, family room, all appl., s/s, carpeting, 3 zone heat, o.h.w., shades & rods, $55,000. After 5:00 p.m. 676-0380.

BUICK: '67 LeSabre-400, a/c, all power, 4 dr. hdtop, $650; Seth-Thomas metronome, $18. AN 1-4365.

CHEVELLE: '67 2 door, 50,000 mi., new tires, $700. MY 4-7890.

SAILBOAT: Sunfish, spar bag, dolly, car top carrier for Chrysler, station wagon roof racks, $395. LI 1-8590.

PONTIAC: '71 Bonneville, all power, auto trans, a/c, am/fm stereo, 26,000 mi. Ask. $3000. 667-4283.

BIKE: 20 in. boy or girls, $20. WE 5-3271.

PUMP: Aquarium air, Supreme, dble. piston, $10. 334-7159.

GOWN: Size 14 mother-of-the-bride, light blue chiffon, embroided lace bodice, long sleeves, $50. After 5 p.m. 731-8008.

GRINDING MACHINES: Heavy duty, sharpen any mower, xtra parts inclu., ask. $400. AN 1-0265.

AIR CONDITIONER: 5000 BTU. 7.5 amp, Philco, window type, $50. After 5 p.m. 829-9691.

LINCOLN: '66 Continental a/c all power 4 dr. hd top low mil Ask. $1000. 681-5974.

HOUSE: Dix Hills, 10 rm. ranch, 5 bedrms., 2½ baths, country kitch., lge. recreation rm., lndscpd. w/fish pond, $65,000, principals only. 864-8195.

HOUSE: Huntington Sta., mother/daught., 3 over 4 compl. apts., ohw, s/s, walk to shops, $32,000. HA 3-6598.

VENDING MACHINE: Ussery type, snack shop, $100. 671-2957.

TRAILER: '72 Avenger, sleeps 8, compl. self-contain., 22 ft., $3,700. JU 8-8548 after 4 p.m.

GUITAR: w/case, straps, $25. AR 1-1149 after 5 p.m.

BOAT: '70 Deep V hull, '70 mfg. fbgl. w/70 evinrude, 60 hp., electr. start, elect. tilt, canvs., lifesavers, fire ext., '70 Holsclaw trailer w/hitch, $1,750. J. Serice, Ext. 2614.

TRAVEL TRAILER: 13½ ft. 'Serra Scooty', sink, stove, ice box. heater, elect., dinette, sleeps 3, mirr., hitch, all access.. $825. 249-4083.

CHAIR: One barrel-back tapestry chair, $25; one drum tbl., $15. 931-5229.

JEEP: '71 Commando, V-6, 4-wheel drive, 30,000 mi., p/b, trailer hitch, tach., free wheel. hubs, radio, roof rack. GE 3-2415.

LAMPS: Two hanging span. lamps, black & gold, $60 pr.; 18th cent. torch lamps, $125; candelabra desk lamp, $35. 698-2634.

HOUSE: Sound Beach, 3 bedrms. colonial, formal din. rm., eat-in kitch., 1½ baths, gar., fin. basement, fenced yd., s/s, 1 block to priv. beach. 744-0632.

HOUSE: Selden, 3 bedrms., 1½ baths, paneled den, 4 appli., w/w, fenced, half basement, lndscpd., many extras, $29,500. 732-5954.

GTO: '68 Pontiac conv. blk. w/wht. int., 400 cu. in. V-8, w/w, new auto. trans., new conv. tp., buck. seats, am, $900. 694-5190.

AUTO: Mini Copper, 1293cc weber carb., scca prepared, c sedan, c/r gearbox lowered, decambered, many extras, spares, trailer avail., competitive regional car. 694-1992.

PROPERTY: Palm Beach Heights, Fla., ½ acre waterfront, $3,800 or terms arrange.. 289-0073 after 6 p.m.

CHARGER: '71 Dodge, auto. trans., p/s, 318 cu., $2,000. 289-5545.

LAWN SWEEPER: Craftsman, 30 in., $30. 265-7036.

TIRES: (2) snows, w/w, studded, Uniroyal, 4,100 mi., L78, $65. 938-6140.

For Sale

GOLF SET: Second hand irons, woods, putters, golf bags, wood covers, 938-5398 after 5 p.m.

HOUSE: Plainview, 3 bedrms., ranch, center hall, 2 baths, firepl., formal din. rm., laundry rm., upper level, 2 car gar., many xtras, ask. $57,000.

BICYCLE: Girl's 20 in., banana seat, hirise bars, coaster brks., basket, $20. OV 1-8134.

MINK: Stole, nat. ranch mink. fully let out, $125 firm. 539-0634.

HOUSE: Uniondale, spacious cape, full dormer, full extension, 4 bedrms. 2 baths, basemt., 1½ gar., sewers, panelled den/util./kitch., din. rm., new cabinets, utilities, more. $30s. IV 5-3041.

HOUSE: Farmingdale, Lenox Hill, colonial 3 bedrms., 2 baths, din. rm., den, all appli., carpet. $35,000. 293-9559.

HONDA: '72 SL-175cc. new motor and new trans., 700 mi., $550. MA 3-2081.

DESK: Lg. oak, solid, nds. paint or varnish, $15. 931-4614.

HOUSE: Woodbury. splanch, 9 rms., 4 bdrms., study, huge den w/bar, 2½ baths, 2 car gar., must sell, ask. $56,500. principals only. 433-9059.

DISHWASHER: GE mobile maid, new pump, nds. motor work. $25. TU 8-0218.

COLOR TV: Sylvania 21 in. home entertain., am/fm phono-stereo, new picture tube, walnut cabinet. $325, will deliver 681-9588.

BOAT TRAILER: W/tilt bed adjust. 12 to 17 ft., $100; 7 hp motor, $100. CH 9-4007.

TORINO: '70 GT, 302 V-8. stand., $1,200. 271-1375.

FREEZER: United Harvest Queen, upright, 18 cu. ft., $195. 928-1043.

TOYOTA: '69 Corona, 4 dr. sedan, radio, std. shift, 55,000 mi., 22 mpg., $750. 584-7285.

COUCH: Modern, brn./tan, 90 in., $70. 485-3128.

PUPPIES: Irish setter, champ. sired, akc., reasonable. 928-0166.

MISC.: Kenmore range, 4 burner, white, w/clock, broiler, 3 yrs., $75; white metal sink and cabinet w/drawers & fixtures, $45. 744-1683, evgs.

MISC.: Boy's 20 in. bike, $25; 8 ft. pram, $100; new 775-14 tire on Chrysler wheel, $20. 261-1186.

BOAT: 20 ft. cruiser, inc., 100 hp. inbd./outbd., Volvo penta fully equip., covers, ready for water, $1,795. 628-2202 after 4 p.m.

EQUIP.: Eico 460 oscilliscope wide band, Jackson 112 cap., bridge, Heathkit IG-28 color generator, Sencore SS105 sweep ckt., analyzer, Eico model 221, VTUM, Mercury 1100 tube tester. $250 for all. 727-7831.

HOUSE: Cape Cod, 5 bedrm., 2 baths, fireplace, fin. basemt., att. gar., lndscpd., No. Babylon, south of Sunrise, 1 mi. to LIRR. MO 9-8807.

BABY FURN.: Carriage, crib, high chair, playpen, best offer. 212-224-5488.

FORD: '68 Fairlane 500, V-8, pwr. steer., pwr. disc brks., a/c, 4 dr., $750. 587-1627.

MISC.: Heathkit GD-57 at 27.045 (red), 3 channel rc. set, 2 servos, unused; Heathkit spectre rc car kit GD-101, unfinished; O.S. max. .19 eng., w/tatone peace pipe, run but not broken in, $150 for all. 333-1130.

GUITAR: 1 Stradolyn bass guitar, hollow body, $65; Layafette Univox, bass amp., 175 watts rms., $125; Atlas mike stand with 19 in. goose neck, $12; Mole bass booster. cords, audio mixer, adapters, $10. 273-1570.

GOLF CLUBS: Spalding Top Flite wds (3); MacGregor Tommy Armour irons, (9), $75. FO 8-4340.

MUSTANG: '71 spts. roof, bright blue, a/t, p/db., p/s, low mi., 269-3831.

PUPPIES: Cocker spaniel. akc papers, champ. sired. 884-0240.

PUPPIES: Cocked spaniel, aks papers, champ. sired. 884-0240.

LE MANS: '68, 4 dr. yellow, blk. vinyl tp., p/s, p/b, 2 new snows, $895. 744-5820.

BEER TAPS: Two stainless steel, 4 tap dispens., 3 ft. x 4 ft. x 18 in., lower compart., insulated for soda or beer, both for $30. GE 3-3681.

MOWER: Self-propelled, reel type, gas eng., 21 in., $35. SU 1-5730.

VENDING MACHINES: Two, cookie, $150 ea. CA 1-9070.

PIANO: "Cable" console, walnut fin., contemp. style, bench, ask. $550. Evgs. 692-2738.

POOL: Mesh cover and skimmer for 24 ft. round pool, new, $75. JU 1-7780.

DEN FURN.: Six pieces ratan: sofa, 2 chairs, 2 end tables, 1 coffee table. 586-8640.

TIRES: (2) Sears 600 x 13 snow tires on wheels, $15 both. MO 9-8055.

For Sale

JR. DINETTE SET: Formica, 4 piece, $50. CH 9-2781.

MISC.: Air cond., 5000 BTU, Gibson, window type, $80; dog's traveling case, 23 x 39½, $15; RCA-Whirlpool washer, $75. 579-4424.

BIKE: Ross, yell., banana seat, motorcycle handlebars, slick rear tire, boy's mod., best offer. 587-0819.

VW: '69 bug, stick shift, red, r/h, $1000. After 4 p.m. 666-6369.

PLYMOUTH: '60, Valiant, eng. & auto trans. good cond., right front damaged. 798-3937.

WASHER & DRYER: Gas, Sears/Norge, approx. 10 yrs. old, $25 both. 543-5283.

BOAT: '68 18 ft. Glaspar, fbgls., Chrysler outbd., sleeps 2, Holzclaw trailer, full canvas, $2300. WE 8-4556.

REFRIG.: GE frost free, 15.9 cu. in., top freezer, white, $95. 567-6875.

POOL TABLE: Slate top, coin oper., bar room size, 3 ft. x 6 ft., $225. 661-3770.

VW: '70 Fastback, green, auto. shift, 13,000 miles, am/fm, $1900. 481-6755.

ROTARY MOWER: Sears 20 in., alum. deck, blade clutch, new catcher, $20. 751-1256.

TOYOTA: '69 Corona, 4 dr., 4 spd., am/fm. fac. a/c. JU 4-5756.

CADILLAC: '70 Coupe de Ville, 37,000 mi., orig. owner, full power, a/c, am/fm, red/white vinyl, $3500. After 5 p.m. 249-4223.

MOTOR CYCLE: '71 Triumph, tiger model 650 cc, $1950. After 6 p.m. ED 4-0990.

VW: '68 Bug, auto. shift, new brakes. 785-6970.

MISC.: Shower base, 32 in. x 32 in. white "Modulite", fbgls., $20; pool, "Muskin", 3 ft. deep x 12 ft., HPE cartridge filter, vacuum, cover, ladder, $30. MY 1-5948.

CHEV.: '71 Camaro, V-8, all power, auto, a/c, xtras, $2650. 751-3512.

BOAT: '62 Zobel, 28 ft, 215 hp, interceptor rebuilt '73, sleeps 4, dinette, galley. MO 7-3043.

BOAT: '70 Larson, 15 ft. fbgls., 60 hp Evinrude, water skis w/tow line, anchor, 2-6 gal. fuel tanks, xtras. After 6 p.m. 269-6221.

CHEVELLE: '68 SS-396, 375 hp, 4 spd. Hurst, L-60's deep, dish chrome wheels, fm stereo, tape deck, headers, ask. $1100. After 3 p.m. Steve 724-0234.

PACEMAKER: '64 (30 ft.), documented, sleeps 7, twin 185's, fly bridge refrig., Bimini top, winter cover & frame, docking lights, radio & depth finder, 2 bilge pumps, air horns, ask. $8990. 665-8146.

MGB: '63, white, conv, $350. LT 9-7630.

BOAT: 14 ft. Luger, 40 hp Johnson, little dude trailer, $450. After 6 p.m. TU 4-1879.

BOAT: '68 Penn Yan Avenger, fbgls, flybridge, inbd., outdrive, 220 hp, sleeps 4, sink, refrig., dinette, xtras, $4900. After 5 p.m. MO 7-1556.

MOTORCYCLE: Jawa 50 cc Mod. M23, 3 spd. fully equip., low mi.. $175. After 5 p.m. MO 7-1556.

PONTIAC: '67 LeMans, 2 dr., 326 V-8, 3 spd. Hurst, posi-traction, duals, tach, ask. $650. 589-7717.

DODGE: '66 Charger, 318 std. trans., tach., console, bucket seats, 4 new tires, $500. 698-1621.

VW: '69 conv., new tires, am/fm, $1000. 249-1641.

COUGAR: '69. auto., fac. air., all power, vinyl top, snows, orig. owner, $1700. Evgs. IV 6-4618.

REBEL: '67, 4 dr., 770, auto, radio, p/s, V-8, ask. $275. 893-1472.

THUNDERBIRD: '60, needs work, $50. After 5 p.m. PI 6-1597.

VOLVO: '69, low mi., ask. $1295. Call anytime 667-9489.

CHEV.: '69 wagon, Townsman, a/c, all power, snows, $1000. After 6 p.m. 543-3208.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

JAMES L. CHRISTON of P/S Resources Control, Plant 34, died at the age of 61. He lived at 37-21st Avenue, Bayshore, and had been with the Company since 1963.

VIRGIL N. ZIRPOLO of Spot Welding, Plant 2, died May 30 at the age of 64. He had been with the Company since 1943 and lived at 74 Park Avenue, Port Washington.

For Sale

BOAT: Chris Craft, 30 ft. sedan, dble. planked hull, 135 hp. ask. $1200. After 6 p.m. 475-8127.

HOUSE: Melville, Dix Hills school dis., 4 bdrm, col, 1½ bath, eat-in-kit, full bsmt, patio, w/w, s/s, 2 zone heat, slate floor in kit, att. gar., nr. shops, high 40's. Afer 5 p.m. 271-2330.

HOUSE: East Meadow Birchwood cape-brick, center hall, 4 bdrm, 2 bath, gar, fin. bsmt., w/w, s/s, all appl., immed. occup, $42,000. 481-0010.

HOUSE: Port Washington, legal 2, family house, 5 rooms, bath, sunporch 1st. floor, 4 rms, bath, 2nd floor, low taxes, 2 blk. to RR. schools, stores, mid. 50's. After 6 p.m. 883-6851.

HOUSE: 3 bdrm. col, 1/3 wooded acre, conv. to stores & pkwy., immed. occup, low taxes, high 30's. 265-1426.

HOUSE: W. Babylon, mother/dght., cape, 9 spacious rooms, 2 baths, fin. bsmt. outside entr., Indspd. plot, extras, $39,000. MO 1-0355.

PROPERTY: Riverfront, Delhi, N.Y., 15 acre vacation site, rolling acreage fronts on Delaware for approx. 300 ft., 1½ mi. to numbered rts, 2 miles outside of town, terms avail. After 6 p.m. MO 1-3868.

HOUSE: Holbrook, 2 yr. old, 4 bdrm. col, 1½ bath, sunken lvg. rm., full bsmt.. pan. fam. rm., 16 x 32 above grnd. pool, att. gar, s/s, ask. $45,000. 981-1336.

HOUSE: Islip Terrace, mther/dght., 10 rms, sep. apt, w/w, pan. thru out, 24 ft. pool,¼ acre, 3 blks. to pkwy., $42,000. 581-1264.

HOUSE: East Moriches, 3 bdrm, eat-in-kit, secluded area, low taxes, 67 ft. x 137 ft., $24,000. 325-0441.

HOUSE: Smithtown, 3 bdrm. col, 3 bath, slate foyer, dng rm, wood pan., eat-in-kit, fully carpet, patio w/awning, 2 car gar., xtra storage, $43,990. AN 5-3789.

VW: '71 Super-Beetle, 9,000 mi., $1800. 584-5714.

BOAT: 16 ft. fbgls, '71 40-hp Johnson-manual, '71 trailer, xtras, $750. After 5 p.m. 269-6829.

CAPRICE: '66, 327 w/four BBL, r/h, 2 dr hdtop, p/s, ask. $350 or best offer. After 4:30 p.m. 884-3055.

VW: '58 w/ '66 engine, $100. HA 7-0245.

VOLVO WAGON: '70, auto., radio w/ rear speak., reclining buck. seat, rear washer & wiper, $2250. 367-4922.

HONDA: '70, gold metal flake, 450 cc, 10 in. ext., high bars, $800. After 5 p.m. (212) 449-1107.

EL CAMINO: '71 pick-up, low mil., bucket seats, p/s, radio, best offer. After 5 p.m. 757-9385.

FORD: '70 Torino GT, lazer stripe, 300 hp, belted tires, 8 track tape, air shocks, low mil., $1800. After 6 p.m. 586-7716.

MOTOR CYCLE: '66 Suzuki, 150 cc, elec. start, saddle bags, lugg. rack, new batt. Call between 4:30 p.m. and 6:30 p.m. 472-2326.

STORM WINDOW: Alum. slider, 3 ft. x 3 ft., dble. panes & screens, $12. CH 9-1019.

OSCILLOSCOPE: Tektronix type 516, P-6006 probes, viewer, cover, $500; Hewlett-Packard Mod. 400D AC VTVM, $80; Heath mod. IG-18 Sine-Square audio generator, $70; Paco mod. M40 VOM. $10. 825-6436.

ENGINE: VW '69, 53 hp, compl. rebuilt, all new parts, $225 installed. 273-6239.

CAMERA: Konica autoreflex-T, F.14, 57 MM Hexanon lens, $170. 265-4698.

BIKE: Girl's 24 in. Firestone balloon tires, $25; boys 20 in., 3 spd., banana seat, sissy bar, hand brakes, $35. 822-8678.

BIKE: Girl's 22 in. Stingray, $25. After 5 p.m. 661-4395.

PUPPIES: Weimaraner AKC, champion bloodine, 8 wks., wormed, inoculated. 543-1885.

TV: G.E. b/w, solid state port., 9 in. for car, home, camper, charger/batt pack, phones, visor, VHF/UHF ant., $90. Before 3 p.m. 757-2212.

ELEVATOR: Stairglide, can be used on left or right side of stairs, $250. 746-2986.

PUPPIES: Great Dane, males, AKC, harlequins & blacks. whelped 4-12-73, earcropping, taping, 1st shot inclu., $100 & up. 735-0470.

MISC.: '72 outbd. 4 hp Mercury, long shaft, f-n-r gears, $210; air cond., 5000 BTU, Philco, 3 yr. old, $70. LI 1-5407.

KITCHEN SET: 36 in. x 48 in. table, pearl gray formica; two 12 in. leaves, four chairs, ask. $30. 249-1488.

HOUSE: Wantagh, 4 bedrms. ranch, 2 baths, enlg. liv. rm. & gar., nr. pkwys, many extras. PE 1-8616.

VALIANT: '63, 4 dr. sedan-V100, 6 cyl.. p/s, r/h, $150 or best offer. 368-3634.

MISC.: Bicycles, fishtanks, from $10. 731-5279.

For Sale

MISC.: Fr. prov. love seat, $35; Westinghouse 9000 btu wndw. a/c, $85; Scott rotary spreader, $20; Whirlpool Imperial dehumdi., $45; Formica kitch. tbl., $10; Lawn sweeper. 333-3820.

HOUSE: Westbury, brick split, 3 bedrms., 2½ bath, liv. rm., din. rm., eat-in kitch., fam. rm., firepl., 2 car gar., lg. basemt., ww, all appli., many xtras, $49,500. 333-3820.

HOUSE: Fort Salonga, frm rnch, 3-5 bedrms. liv. rm., form. din. rm., 2½ bths, eat-in kitch., panel. den, w/brick firepl., centr. a/c, w/w, s/s, patio, one acre plus, $64,500. 757-0929.

ROAD RUNNER: '71, 440 6 pack, 4 spd. hurst, air grabbr., stereo cassete, racing orange, viny tp., dual exhaust, $2,500. 231-4034 evgs.

HOUSE: Strathmore colonial eton, full fin. basemt., 3 zone ohw, 6 bedrms, self-cleaning oven, 6 appli., w/w, form. din. rm., huge den, 2½ baths, firepl., fenced back, pool, many extras, $44,900. 928-3421.

LOT: 50x150 ft. Uniondale, $10,500; Rims for jav'in (red), 14 in. rim, $10. IV 5-3072 after 5:30 p.m.

RAFT: 2 man rubber, w/oars, 4 air chambers, foot pump, $20 firm. JU 8-6771 after 6:30 p.m.

CHEVY: '66 2 dr. hdtp., 2 tone, p/s, r/h, $325. WE 5-8166.

BUICK WAGON: '72 estate wagon, all pwr., a/c, $4,800. E. Johnson, Ext. 9226.

VW: '65, sun roof, r/h, snows on rims, JU 8-6771 after 6:30 p.m.

PROPERTY: 2 plots, Nissequoque. waterviews, nr. beach, boats, golf, shops, 586-9441 evgs.

OLDS 442: '70, auto., a/c, am/fm, stereo, p/s, p/b, $1,800 firm. 212-441-3367.

FURNITURE: Piano, bedrm., din. rm., liv. rm., baby crib, high chr., reasonable. WE 1-6998.

MOBILE HOME: Syosset, '69 Princess, 12x50 ft., w/wood burning firepl., 2 bedrm, 1½ bath, w/w, a/c, patio, fenced yd.. tool shed, 921-2714 evgs.

DRESSER: Baby's, 2 dr., ask. $30. 883-1467 after 9 a.m.

BEAGLE: 1 yr., wht/brn/blk., akc., house broken, good w/children, $80. J. McGowan, Ext. 84817.

BUICK WAGON: '68 Sport wagon, 6 pass., 350 V8, stand. trans., 665x1430 after 4 p.m.

MISC.: 3x100 ft. turkey wire fence, w/4 8 ft., steel posts, $25; Four wd. kitch. chr., $15. 588-6364.

MOBILE HOME: 12x50 ft., 2 bedrms., leaving xtras. 691-0657.

FORD: '67 Galaxie, 6 cyl.. ds. work, $200. TU 4-1397.

APACHE RAMADA: '69, sleeps 8, stove, ice box, dinette, goucho, 12v/110v, city water/pump, sink, canopy. 581-4501.

BOAT: '62 32 ft. Luhrs Sedan, sleeps 6, new 265 palmer f.w.c., with dock for summer, extras. MO 9-6256.

CAMERA: 35mm slr, Bester topcon auto-100, f,2 lens, $45. 731-1839.

POOL: 4x18 ft., w/liner, ladder, skimmer, vacuum, xtra strength filter, used 2 seasons, $70. CH 9-3081.

CHINA: Comp. service for 12, xtra cups, saucers, serv. pcs., silver flor de les on white, $45. 864-6649.

BOAT: 17 ft. Owens runbt., w/trailer, 70 hp. Mercury outbd., nds. work, best offer. 751-5335.

MOORING: 100 lb. mushrm. anchor, 30 ft., chains, buoy lines, $85; Boat, 10 ft. alum. dinghy, $60. G. Kubiske, Ext. 1101.

FURY: '64, 4 dr. sedan. 6 cyl., auto., '67 motor, new snows/brks., r/h, $400; Admiral console stereo, am/fm/fm stereo, tape jacks, dk. wd., 4 new Lafayette spkrs, $150. 938-7359.

HAM STATION: am, $1,000 worth of equip. and parts, $300 for all. PE 1-3470.

PUPPIES: Irish Setter, champ. sired, akc. reg., reasonable. 928-0166.

MISC.: 30 in. exhaust fan, 30x30 in. ceiling louver, gravity-close, $25; Fedders a/c, $25; Braun hi-fi radio (am-fm) w/Telefunken record player, $60. CH 9-4145.

HOUSE: Greenlawn, 4 bedrm. cape, l/r, d/r, 2 baths, fin. bsmt., wet bar, ww, lg. 2 car detach. gar., Indscpd., sk. $39,500, principals only. 757-7761.

SAILBOAT: Lightning #631, dacron jib, and 4 mainsails, dinghy, oars, cushions, AN 1-1364 after 6 p.m.

OUTBD. MOTOR: Evinrude 7½ hp., w/tanks, $150. 751-0697.

TOYOTA: '70 6 cyl. Crown, 7 pass., sta. wagon, tan, a/c, tint. gl., am/fm, roof rack, std. shft., 27,000 mi. $1,995. 584-7285.

For Sale

BOAT: '66 Thunderbird, fbgl. 20 ft., sleeps 2, head, 100 hp Evinrude ('67), Michigan hydraulic trail., elec. winch, s-to-s, compass, tach., full canv, twin 18 gal. saddle tanks, ask. $2,800. 694-2863.

BOAT: 12 ft. Sears gamefisher, all fbgl., extra pole holders, bow and stern lights, $125. 475-7181.

TRAILER: '72 Travel, ltwt., sleeps 5, kitch., xtras, ask. $1,550. 744-3599.

BOAT: 25 ft. Chriscraft, cabin cruiser, rebuilt 185 hp. eng,. sleeps 4, legal head, $2,100. 587-3747.

HOUSE: Nassau Shores, Massapequa, 18 mos. old, hi-ranch, 3 br., d/r, l/r, eat-in kitch., 1½ baths, full basemt, finished fenced, patio, Indscpd, low $40s. 798-7229.

RAMBLER: '63 American, conv., auto. $150. 549-3218.

OLDS 442: 2 dr. hd. tp., blk., 400 cu. in., 350 hp., 4 spd., posi-track, orig. owner, $1,100. 265-0980.

CALENDAR of events

Notice of events for period June 22 to July 6 should reach PLANE NEWSS by June 24.

Chess Club: Tues., 5:30 p.m., Plt. 30 cafeteria, open to outsiders. Alex Ikonnikow, Ext. 1251.

Coin Club: Every Wed., 12:05 p.m., Pl. 25 vendor cong. rooms., informal lunchtime meet. Ken Hale, Ext. 1936.

Duplicate Bridge Club: Every Thurs.. 6:00 p.m., Plt. 30 cafeteria, CWB Franchised with ACBL, duplicate bridge game, outsiders welcome. D. Panshoukian, Ext. 2798/87280.

Family Campers: Camp-out, June 8-10, Rhinebeck, N. Y. and June 29, 30, July 1-4, Pennsylvania Dutch area. Herman Heinlein, Ext. 9518.

Stamp Club: First 3 Wed. of month, 5:00 p.m., Plt. 30, Cafeteria, circuit book sales, swap, auction, discussion, new members, guests, fledgling philatelists. Elliott Manaker, Ext. 2324.

Tennis Club: Every Thurs., 7:00 p.m., Plt. 24. Ted Wakulinski, Ext. 7382.

Model Railroad Society: Tues., June 19, 7:30 p.m., Plt. 28. Jack Meany, Ext. 1269.

American Production/Inventory Control, Tues., June 19, 6 p.m., Pickwick Motor Inn, Plainview, LIE exit 48, "Job Enrichment-Panacea or Problem?" by J. S. Jenness-Con Ed., for info. call N. Heilweil, Ext. 7629.

Instrument Society of America: Friday, June 22, 8 p.m., Narragansett Inn, annual dinner dance. contact R. Romaneck, Ext. 2775.

Amateur Radio Club: Sat.-Sun., June 23, 24, 10 a.m., McKay Field, ARRL Field Day exercise, Emmett Goodman, Ext. 87125.

CORRECTION

In the last issue, we tried to stretch the GAA trip to Martinique to one-and-a-half weeks. Sorry, 'bout that! It will only be one week, from November 17 to November 24, instead of November 29th.

plane GRUMMAN news

Published twice a month for the employees of Grumman Aerospace Corporation, Bethpage, N. Y. 11714, as a function of the Public Affairs Dept., Vice President J. B. Rettaliata, director.

Manager, Internal Communications
Brian Masterson

Managing Editor
Charles Petty

Feature Editor
Al Wehren

Editorial Assistants
Kathy Housley
Cynthia McCaskiel

Telephone
Plane News: 3293
Plane News from outside line: LR 5-3293

Planning their course to capture the L.I. Industrial Golf League title for the tenth year in a row is the Grumman varsity golf team: (l-r) Mike Cherry, coach; Jim Alverson, captain; Bill Suppa, John Malanczuk, Ted Domagala, Steve Gray, Caesar Rescigno, Ken Prager. Tony Cisco is not pictured.

Tee off for Pinehurst June 20

If you believe in women's lib, men, here's an opportunity to practice what you preach. GAA has scheduled its first mixed Pinehurst tournament of the season for Wednesday, June 20, at Bethpage State Park. Tee-off time will start at 4:30 p.m. on the Yellow course.

In a mixed Pinehurst, both male and female partners tee off, play each other's drive on the second shot, and then select the better lie for the third shot. From then on, they alternate play using one ball until it is holed out.

Greens fees are $5 apiece. Part of that fee goes toward kickers prizes that will be selected after the tourney. And if you're not too good a golfer, don't let it bother you. When you start out, you and your partner select a handicap—any handicap—that, when subtracted from your final nine-hole score, wil allow you to finish between 30 and 40.

And ladies, if you really believe in women's lib, you won't object to having a duffer for a partner. Sign-up must be made at the GAA office in Plant 30.

Discount tix

Discount tickets for "Carousel" at Jones Beach are now on sale at all Employee Services Offices. Regular price tickets are $6.60; with employee discount, $5.85; and $5.50 tickets with discount are $4.75. The play will run from June 22 to September 3.

GRUMMAN AEROSPACE CORPORATION
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Woodpeckers and Condors win softball league openers

The Woodpeckers and the Condors annihilated their opponents in the first two games of the Tuesday after-hours league. The Woodpeckers took on the Campbell Kids, beating them 11-3. Gordon Bell was the winning pitcher, and Wayne Woodhams supplied the power with two doubles, three runs, and two RBIs. The winners had 14 hits to the losers 10, but the Campbell Kids committed five errors.

In their second game, the Woodpeckers squeezed by the Mets, 10-9. Even though the Mets had 15 hits to the winners 13, they came up on the short end of the stick in the bottom of the eighth when back-to-back singles by Charlie Esposito and Stu Kornreich gave the Woodpeckers their second win.

With strong rallies in the second and fourth innings, the Condors opened their season by devouring the Mohawks, 11-6. Bobby DeCicco was the man with the big bat, going four-for-four scoring three runs, and one RBI. John Kennedy was the winning pitcher. In the Condors second game, they squeaked by the Jets, 11-10. In the bottom of the sixth, the Jets soared away with seven runs, making it 10-9 in favor of the Jets. The Condors were pressured and came through with some clutch hitting by Jim Eckert, Dick Coyer, and Lou Cotignola, scoring two runs.

The Hellcats beat the Mets, 14-10, behind the strong pitching of Jerry Varrichio, with four strikeouts. Bill Alemachives hit a two-run homer and Jesse Mealing went five-for-six at the plate, including one triple. Contributing doubles for the winners were Steve Meehan and Tony Marchese. Besides coming out on top with runs, the Hellcats topped the Mets in hits, 18-8.

Champion tourney

GAA will sponsor its third annual bowling tournament of champions this Sunday, June 10, starting at 1:30 p.m. at Sheridan Academy in Mineola. In last year's tourney, the All Togethers of the Blue Mixed league won the team crown . . . and they'll be back again this year to defend their title against 23 other championship teams from GAA pin loops.

Food, fun planned for July 21 picnic

All the Grumman family picnic needs to insure a fun-filled day is a promise from Mother Nature for a little sunshine. Otherwise the picnic-to-end-all-picnics is slated for Saturday, July 21.

Gus D'Errico, director of Employee Services, says the picnic will feature the usual array of amusements, truckloads of food, kegs of beer, games and vaudeville acts. The traditional main attraction has been the Junior Glove boxing matches. This year the entries will be accepted on a first-come, first-served basis; this means, no signing up at the Calverton picnic grounds. So fill out the application and mail it in to John Koloski, Plant 1.

Al Kordula and his musicians will be on hand to add background and dance music. And don't worry about your stomach . . . there will be plenty of hot dogs, ice cream, soda and beer. And as for the kids, there will be more than enough things to keep them busy . . . ferris wheels, carousel, trains, boat rides, and octopus rides.

Mark the date—July 21—on your calendar. Tickets will cost $2.50; children 12 and under admitted free. All Grumman employees are invited to a day in the sun at Calverton. Tickets are now on sale in the ESO offices.

Picnic Junior Gloves

Entry registration

Entrant's name .....

Age ..... Weight .....

Sponsor's name .....

Dept. .....Plant ..... Ext. .....

Entries are to be forwarded to John Koloski
Plant 1 Employee Services Office